



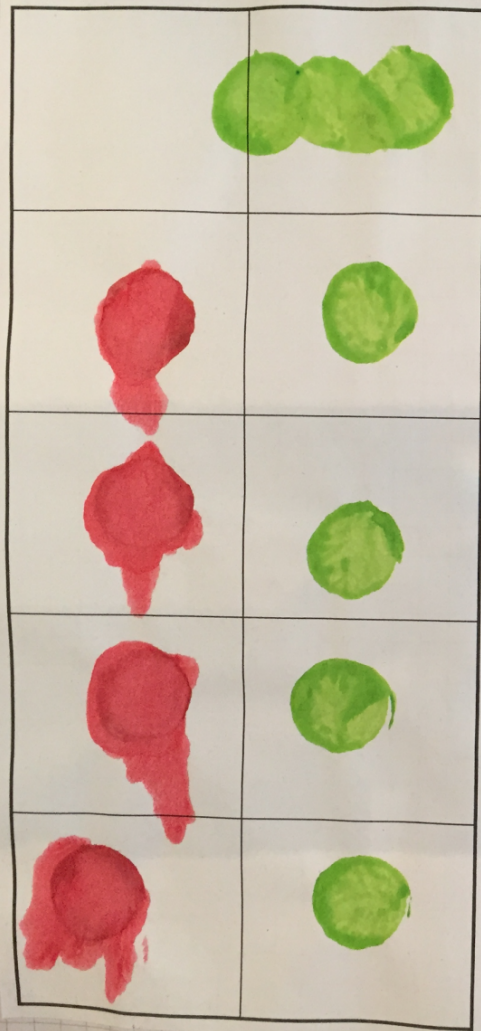
Math Journaling for Young Learners

Susan Spigelmire, Harvest Valley Elementary School
Madeleine Jetter, CSU San Bernardino



Interactive math notebooks...

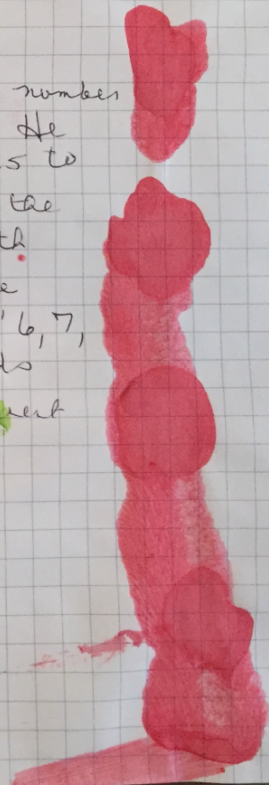
- Adapted from science notebooking strategies
- Document teaching and learning across the year
- Record prior learning for students' future reference
- Demonstrate students' mathematical thinking



11/13/17

9 nine

traces number
and number word. He
follows directions to
put 5 dots into the
ten frame. With
another color, he
counts from 5, "6, 7,
8, 9" and adds
dots in a different
color.



Notebook elements

Output pages: student generated

- Pictures
- Problem solving
- Exit tickets
- Reflection:
 - I learned...
 - This was hard/easy because...
 - This is important because...

Input pages: teacher generated

- Handouts
- Foldables
- Vocabulary
- Notes / pictures / diagrams
- Practice

Additional elements, depending on developmental level:

- Dated or numbered pages
- Teacher feedback - stamps or written comments
- Table of contents

What's so great about math notebooks in early childhood?

- Formative assessment
- Progression from beginning to end of year - can refer back to earlier work
- Value to students - more substantial than a worksheet to show what they know

Samples: PK - Grade 2

Check out examples of student notebooks.

Some things to look for:

- How do the notebooks show students engaged in mathematics?
- How do students reflect on their work?
- How can/does the teacher assess?

Managing notebooks in early childhood - keep it simple!

- Precut items while students learn scissor skills
- Teach kids how to glue
- Stamps (10-frame, number line), labels
- Procedures - where in the room, when to take out and put away
- Centers or small groups

Susan's first year of math notebooking

- I tried to do it all: cover page, table of contents, page numbering
- I did not pre teach cutting and gluing
- I tried to do it whole group
- Overwhelmed with checking all students work

How Susan does it now....

- I have simplified the cover page to 4 questions
- I do not do a table of contents or number each page
- I do math notebooks during centers and whole group later in the year
- I check each page as it is done with a simple stamp or star
- Don't expect perfection! Student ownership of their learning is key

Tips for getting started

- Consider teaching scissors and gluing skills
- Output pages - kids may dictate their explanations for the first months school
- Pagination and Table of Contents: consider adapting or omitting
- Don't expect perfection! Student ownership of their learning is key
- Try for 2-3 times per week in early childhood

Example: K.CC.4 and PK Number Sense

Counting Collections

Today I counted 3 bears

Here is how I did it:



Name Christian

Counting Collections

Today I counted 11 critters

Here is how I did it:



Name Christian

Counting Collections

Today I counted 11 legos

Here is how I did it:



Name Christian

Counting Collections

Today I counted 8 rubber bracelets

Here is how I did it:



Name Christian

Counting Collections

Today I counted 7 snail grips

Here is how I did it:



Name Christian

Example: Composing Shapes K.G.6

Name _____

Problem Solving • Draw to Join Shapes

Essential Question How can you solve problems using the strategy *draw a picture*?

Unlock the Problem

PROBLEM SOLVING
Lesson 4.12

Geometry—K.G.6
MATHEMATICAL PRACTICES
MP.5, MP.7, MP.8

DIRECTIONS How can you join triangles to make the shapes? Draw and color the triangles.

four hundred one 401

Try Another Problem

DIRECTIONS 1. How can you join the two triangles to make a rectangle? Trace around the triangles to draw the rectangle. 2. How can you join the two triangles to make a larger triangle? Use the triangle shapes to draw a larger triangle.

402 four hundred two

You try it

- Think of a topic you will be teaching in the next few weeks.
- What do you want kids to be able to do? How will they show this on the output page?
- What will you provide as input? (foldable, sort...)

Questions?